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19 May 1971

MEMORANDUM FOR: Deputy Director of Central Intelligence

THROUGH : Executive Director-Comptroller
Director, Office of Planning, Programming & Budgeting
Assistant Deputy Director for Intelligence

SUBJECT : Request for Approval to Contract for the Design and Fabrication of a Dual Format Data Block Reader with Fairchild Space & Defense Systems Division at a Cost of [redacted] from FY-1971 R&D Funds 25X1

1. This memorandum requests approval for the commitment of R&D funds for a NPIC contract. The specific request is stated in Paragraph 9.

2. The National Photographic Interpretation Center, through NSCID #8 and the National Tasking Plan, is charged with providing the most effective, timely, and economic exploitation of photography and remote sensory products. The Center is also charged with providing certain additional support to the Intelligence Community, such as updating and maintaining the National Data Base and maintaining a backup ephemeris capability. Reference is made to the manual, [redacted] 25X1 [redacted] October 1970, Page 9 which states: "NPIC will maintain a backup capability to the Mission Performance Report (MPR). In the event the MPR cannot be made available, NPIC will develop ephemeris and frame data based on telemetry tapes provided from the [redacted] 25X1 [redacted] and actual film formats. This information 25X1 will then be made available to all MPR recipients." It

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~~is this requirement the subject request is addressing.~~

3. While NPIC has been aware of this general backup data requirement for quite some time, a new responsibility has been recently introduced. Latest reports indicate that the MPR, which preceeds each mission, will not carry the time data read-out required for data reduction of the Mapping Camera System [redacted] -- this information is contained only in the binary data block on the film. It will therefore be necessary for NPIC to ~~machine~~ read the time data from each frame of Stellar/Terrain photography after receipt of the film in the Center. This information will enable NPIC: to accurately update the National Data Bank, to provide Center components with accurate data for positioning targets and to provide the mapping community with the accuracy required in charting and mapping. The main camera system time readout, which is included in the MPR, will not suffice for the Mapping Camera System since the two systems are separately operated and it is possible that the conjugate imagery can have as much as 100% or as little as ~~no~~ 0% ~~duplicate~~ common coverage between the terrain camera and the main panoramic cameras.

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5. The proposed Dual Format Data Block Reader (DFR) will provide the capability of rapidly and accurately reading time data from both the stellar and terrain camera formats [redacted] This electro-mechanical device will read the data from ~~either~~ both of two predetermined formats, on negative or positive film, with the film transported at a rate of 12 inches per second. The DFR will

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4. Investigation into manually providing this readout has shown that for the 4000 frames of information involved, it may be possible, by interpolation, to provide this data within one working week. However, the accuracy of the system (time readout to 0.1 millisecond) will not be maintained by interpolation of the data. Additionally, approval has been granted to replace the 3400 type film with ultra thin base film in the fourth S/I package - which will increase the frame count from approximately 9000 frames to approximately 7000 frames - virtually an impossible task for manual read-out. It is anticipated that Center operations will require and make the utmost use of this refined accuracy inherent in the Stellar-Terrain system, as it will furnish target positional information several magnitudes better than current systems. Additionally, the Mapping, Charting and Geodetic (MCG) groups in the Intelligence Community will [redacted] use the data in their exploitation for position refinement.

locate, read, organize, and place the data on magnetic tape with appropriate recognition patterns to be made available for processing by the NPIC central computer, ~~and in turn combined with the existing MPR of the mission.~~ The data from the stellar data block will be combined with that from the terrain data blocks in the NPIC computer and is then integrated with the MPR of the mission. An operator will be able to select a mode of operation, initiate signals, monitor, and exercise controls through the front panel assembly of the DFR.

6 The effort is felt to be fairly straight-forward with little risk involved due to the fact that the selected contractor has built similar readers for the Center. The first reader was built to handle the KH-4A data, while the second will handle the KH-4B and the Stellar/Terrain data [redacted] Investigation into modification of the second reader to handle the [redacted] material revealed that it would be more expensive to modify the existing equipment than to build a new reader specifically for the [redacted]

7 The contractor has offered NPIC the choice of two options for this project. One in which he supplied the reader, the magnetic tape drive and the printer. The second option was for the magnetic tape drive and its electronics, and the printer and associated electronics to be supplied as

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GFE. The second option is the more desirable, not only because it saves [redacted] but also because the equipment 25X1
can be ~~easily~~ supplied GFE since only one of ~~the~~ two complete systems is being utilized within NPIC. There is no anticipated follow-on to this procurement, as one instrument will handle the anticipated work load.

8. [redacted] will be the Project 25X1
Officer for this contract. [redacted] is 25X1
appropriate for this work. Agency association with the project will be classified CONFIDENTIAL, but the work, project title and reports will be UNCLASSIFIED.

9. It is requested that approval be granted to negotiate a contract with Faichild Space and Defense Systems for the design and fabrication of a Dual Format Data Block Reader at a cost not to exceed [redacted] from FY-1971 R&D 25X1
funds.

ARTHUR C. LUNDAHL
Director

National Photographic Interpretation Center

Attachments:
1. Proposal
2. Form 2420

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CONCUR:

Assistant Deputy Director for Intelligence — Date

APPROVED:

Deputy Director of Central Intelligence — Date

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